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Animal and Plant Health Inspection Service

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Don't Move Gypsy Moth





The U.S. Department of the Interior's National Park Service (NPS) supports a nationwide integrated pest management approach toward managing the gypsy moth and other exotic pests. Education and awareness are key in spreading the word about gypsy moth. We gratefully acknowledge NPS' cooperation in distributing this leaflet to park visitors. Inspecting recreational vehicles and camping equipment for gypsy moth eggs before leaving home can significantly reduce the likelihood of spreading this pest to currently uninfested areas. We appreciate NPS' help in distributing this brochure to visitors traveling through National Park sites.

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Cover photo: Inspect your outdoor household articles like decorative containers for gypsy moth egg masses. Use a stiff brush for removing them. To destroy the egg masses, place them in a container of hot, soapy water.

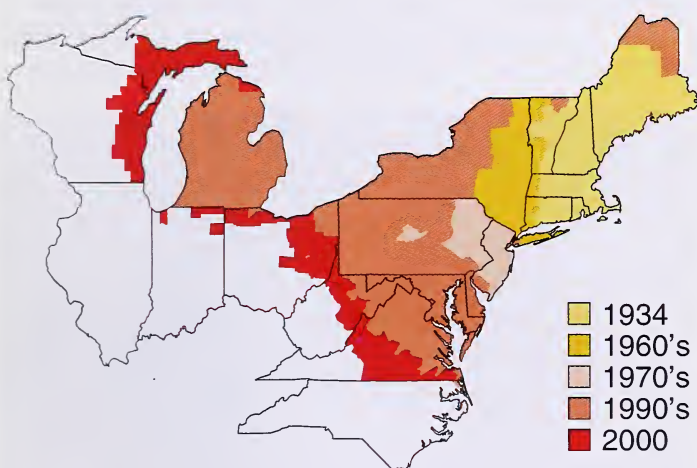
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Don't Move a Serious Pest to a New Neighborhood

Planning to move from a State infested with gypsy moth to one that is not infested? Moving your camper or recreational vehicle across State lines? You need to know about a regulation intended to prevent the interstate spread of this pest.

Studies show that most new, isolated infestations of the gypsy moth were started from egg masses transported on outdoor household articles—garbage cans, lawn furniture, children's toys—any item accessible to the female moth at egg-laying time. As a result, the U.S. Department of Agriculture (USDA) enforces gypsy moth quarantine regulations requiring that such articles be inspected for all gypsy moth life stages prior to movement outside of the generally infested area. As shown in figure 1, this includes most of the northeastern part of the United States.



The area infested with gypsy moth changes each year. You can find a map of the current regulated area at <http://www.aphis.usda.gov/ppq/maps>

Figure 1—The gypsy moth is widely distributed in the Northeast. This map illustrates the parts of the United States regulated for gypsy moth as of March 2001.

In 1999, following a successful pilot project, USDA's Forest Service in cooperation with the Animal and Plant Health Inspection Service (APHIS) launched the Slow the Spread (STS) campaign, a program created to reduce the rate of gypsy moth movement into noninfested areas. STS uses education, detection, and control strategies to slow the spread of this pest across the 1,200-mile gypsy moth frontier from Wisconsin to North Carolina. The program area is located ahead of the advancing front of the gypsy moth population. The program focuses on early detection and suppression of the low-level populations detected along this advancing front, disrupting the normal cycle of population buildup and spread.

If you live where the gypsy moth is prevalent, you know the damage the larval stage of this insect can cause. Those leaf-eating caterpillars devour the leaves of many hardwood trees and shrubs, giving summer scenes a barren, wintry look. Gypsy moth larvae have been known to defoliate up to 13 million acres of trees in 1 season, damaging local ecosys-



Figure 2—At first glance, this appears to be a beautiful forest, but nearly half the trees in the background have been defoliated by the gypsy moth. Defoliation alters habitat, adversely affecting canopy and understory ecosystems.

tems and killing trees outright. The larvae also crawl on homes, litter lawn furniture and pools, and make outdoor activities hard to enjoy.

People glad to be leaving the annoyance of living with the gypsy moth took egg masses along unintentionally—to hatch and spread far from their old neighborhood. Millions of Federal and State tax dollars are spent every year to limit the movement of these pests and to eradicate the isolated infestations that have been established in previously uninfested areas. We need everyone's help in detecting gypsy moth populations and keeping this insect from spreading to new neighborhoods.

Failure to inspect household articles for gypsy moth life stages prior to movement from a regulated area is a violation of USDA quarantine regulations and may result in significant civil penalties. Inspecting your personal property for gypsy moths goes beyond being a good neighbor: it is required by law. Don't be responsible for moving an old pest to a new neighborhood.



Figure 3—A severe infestation can leave trees barren in the middle of the summer. Then, in an attempt to releaf, trees use up stored energy and become stressed.

Inspecting for Gypsy Moth

You are responsible for making sure that your outdoor household articles don't move the gypsy moth. How you do this is your decision. The quarantine regulations allow for self-inspection of household goods, and this pamphlet was developed to assist you should you choose to self-inspect. Alternatively, you may pay a USDA-trained certified pesticide applicator to inspect the articles you plan to move.

APHIS officials work cooperatively with the States in monitoring anyone who moves outdoor household articles out of the regulated area. These officials check to see if people who are moving have a document certifying that their outdoor household articles have been properly inspected and found to be free of gypsy moth. Without such a certificate, movement of the outdoor household articles constitutes a violation of the quarantine. Appropriate action, including the assessment of civil penalties, may be taken against the owner of the infested household goods.

Self-Inspection

If you decide to do the inspection yourself, include anything accessible to a gypsy moth. Inspect any article left outdoors, stored in areas open to the outside, or stored indoors but used outdoors.



Figure 4—If you inspect for gypsy moths on your own, make sure to thoroughly check all outdoor household articles for egg masses and remove and destroy them.

The checklist at the end of this brochure lists many common outdoor household articles that could carry gypsy moth life stages. Carefully examine each article, remove any life stages found, destroy them, and check the item off the list. Be sure to enter the date and place inspected and sign at the bottom. This will be your official certificate of self-inspection. Include this list with the paperwork accompanying your move, and give it to the driver of the moving van. If you are moving yourself, be sure to keep the paperwork with you in case it is requested at any point during your trip.

Professional Inspection

Participating State-licensed pesticide applicators are trained to inspect your household items and treat heavily infested articles or inaccessible spaces with registered pesticides if necessary. These persons are also authorized to issue you a certificate stating that your outdoor household items are free of gypsy moth.

A certificate must always accompany outdoor household items in transit. This certificate will satisfy the requirements of all uninfested States and will relieve you of liability should your items be re-inspected by a State official in the destination State and be found to harbor gypsy moth. From late spring to the end of summer (generally mid-May through August), a certificate may be issued up to 5 days before departure, when gypsy moth larvae are active and adult females are laying eggs. In the fall, winter, and early spring months (generally September through mid-May), a certificate may be issued as much as 2 weeks before departure.

You may find pesticide applicators who are participating in the program through local advertising.

Recognizing Gypsy Moth Life Stages

If you choose to inspect your outdoor household articles, you need to be able to identify gypsy moth life stages. Most important is the egg mass. This publication contains photographs to help you.



Figure 5—The gypsy moth egg mass is covered with buff or yellowish “hairs,” giving it a velvety appearance.



Figure 6—Identifying gypsy moth larvae is easy because they have several pairs of blue and red dots on their back.

The gypsy moth goes through four stages of development—egg, larva (caterpillar), pupa (cocoon), and adult (moth). It has one generation a year. During the summer months, female moths attach egg masses to trees, stones, walls, logs, and other outdoor objects, including outdoor household articles. Each egg mass contains up to 1,000 eggs and is covered with buff or yellowish “hairs” from the abdomen of the female. The velvety egg masses vary in size but on average are usually about an inch and a half long and three-quarters of an inch wide (a little bigger than a quarter).

In southernmost infested States, eggs begin hatching in late March. Hatching starts around early May in the northernmost infested States. The grayish, hairy caterpillars are tiny at first but easy to identify when about half-grown because they have pairs of red and blue dots on their back. Mature caterpillars are from 1.5 to 2.5 inches long. These caterpillars are voracious feeders and, in outbreak situations, can devour all the leaves from the trees and plants in entire neighborhoods and forests.



Figure 7—Gypsy moth caterpillars survive in high numbers in North America because here, unlike Europe, they don't have many natural enemies.

Caterpillars stop feeding when they enter the pupal or "cocoon" stage, ranging from May in southernmost infested States to early July in northernmost infested States, varying with weather and climate. Adult moths emerge from the dark-brown pupal cases 10 to 14 days later. Males have light tan to brown wings marked with dark, wavy bands, and a 1.5-inch wingspread. Female moths are larger than males and generally white, with a wingspread of about 2.5 inches. Despite having larger wings, the female moths cannot fly.



Figure 8—Adult gypsy moths emerge in the summer from dark-brown pupal cases that can remain on trees and other surfaces after the moths are gone.



Neither sex feeds in the moth stage; adults mate and lay eggs only. The eggs are the dormant stage of the life cycle, allowing the pest to survive winter weather. In the spring the eggs hatch, starting the life cycle over again.



Figure 9—The adult female gypsy moth is about twice the size of the male and white in color.

Population Growth and Decline

A number of factors, such as available food sources, predators, parasites, and disease, affect the size of the gypsy moth population each year. Depending on the pest's population cycle, homeowners may experience severe gypsy moth infestations for a year or two and then go several years without noticing any obvious signs of infestation. Just because the gypsy moth appears to have disappeared, however, does not mean it's gone. It may be present in small numbers 1 year, but before long, the population cycle will resurge. In the absence of monitoring and appropriate suppression, the gypsy moth will again destroy trees and shrubs in infested areas.

What To Do If You Find Gypsy Moth Life Stages

An effective way to dispose of gypsy moth life stages is to remove them by hand. Scrape egg masses from their locations with a putty knife, stiff brush, or similar handtool. Dispose of egg masses and other life stages in a container of hot, soapy water, or place them in a plastic bag, seal it, and set it in the sun. You may elect to abandon articles if they are heavily infested and of little value to you.



Figure 10—Yard tools left outside during the spring and summer months are a favorite spot for female gypsy moths to deposit egg masses.

Some people are allergic to gypsy moth hairs, which are attached to all life stages. Allergic reactions include skin rashes and respiratory disturbances. If necessary, wear gloves, protective clothing, and a dust mask.

Depending on the time of year, you may have to protect your articles from reinfestation by caterpillars or moths after inspection. The best way to do this is to store the articles inside. Do not conduct the inspection more than 5 days prior to your departure.

Remember, you are the key to preventing the interstate movement of gypsy moths on outdoor household articles, including recreational vehicles. Do your part to prevent the spread of this pest.



Figure 11—Make sure to turn over farm implements and other equipment that can conceal egg masses from view and provide protection against predators and harsh winter weather.

Additional Information

If you need additional information about the Federal regulations on moving outdoor household articles, contact one of the following:

- Your State's regulatory officials, usually listed under department of agriculture, plant protection or regulatory division, in the State government section of your telephone directory.
- A Federal regulatory official, listed in the Federal Government section of your telephone directory under USDA, APHIS, Plant Protection and Quarantine.
- Your county's agriculture extension agent, listed in the Federal Government section of your telephone directory under USDA, Cooperative State Research, Education, & Extension Service.
- A local commercial moving company. Movers have been cooperating with USDA to be sure that the Federal regulations about gypsy moth are followed.

For more information about gypsy moth and APHIS cooperators in the fight to control this pest, log onto the following Web sites:

STS Program

- <http://www.aphis.usda.gov/oa/pubs/fsgmpro.html>

Species profile of the gypsy moth

- <http://www.invasivespecies.gov/profiles/eurogypsymoth.shtml>

Biology and distribution of the gypsy moth

- <http://www.ceris.purdue.edu/napis/pests/egm/index.html>

APHIS' Agricultural Quarantine and Inspection ports in the United States

- <http://www.aphis.usda.gov/travel/aqi.html>

State partners

- <http://www.reeusda.gov/1700/statepartners/usa.htm>

National Plant Board

- <http://www.aphis.usda.gov/npb/npbmemb.html>

Self-Inspection Checklist

Important: Make sure this checklist goes with your household goods when you move!

Checklist and Record of Your Self-Inspection

Date: _____

Address: _____

Recreational or Camping Items

- | | |
|--|--|
| <input type="checkbox"/> Backpacks | <input type="checkbox"/> Recreational vehicles |
| <input type="checkbox"/> Basketball backboards | <input type="checkbox"/> Snowmobiles |
| <input type="checkbox"/> Bicycles | <input type="checkbox"/> Sports equipment |
| <input type="checkbox"/> Boats | <input type="checkbox"/> Tarps |
| <input type="checkbox"/> Boat trailers | <input type="checkbox"/> Tents |
| <input type="checkbox"/> Campers | <input type="checkbox"/> Waders or boots |
| <input type="checkbox"/> Ice chests | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Motorcycles | |
| <input type="checkbox"/> Motor homes | |

Household Items

- | | |
|---|---|
| <input type="checkbox"/> Air conditioners | <input type="checkbox"/> Refrigerators |
| <input type="checkbox"/> Barrels | <input type="checkbox"/> Sheets of plastic |
| <input type="checkbox"/> Cardboard and wooden boxes | <input type="checkbox"/> Shutters |
| <input type="checkbox"/> Clothesline poles | <input type="checkbox"/> Storage sheds |
| <input type="checkbox"/> Clothespin bags | <input type="checkbox"/> Storm/screen doors and windows |
| <input type="checkbox"/> Empty plant containers | <input type="checkbox"/> Tanks for propane and oil |
| <input type="checkbox"/> Firewood | <input type="checkbox"/> Television antennas |
| <input type="checkbox"/> House plants taken outside during the summer | <input type="checkbox"/> Trash cans |
| <input type="checkbox"/> Ladders | <input type="checkbox"/> Washing machines |
| <input type="checkbox"/> Outdoor doormats | <input type="checkbox"/> Water hoses |
| <input type="checkbox"/> Outdoor thermometers | <input type="checkbox"/> Weather vanes |
| | <input type="checkbox"/> Window awnings |
| | <input type="checkbox"/> _____ |

Building Materials

- | | |
|---|--|
| <input type="checkbox"/> Bricks | <input type="checkbox"/> Tools and toolboxes |
| <input type="checkbox"/> Cinder blocks | <input type="checkbox"/> Water pipes |
| <input type="checkbox"/> Cement mixing tubs | <input type="checkbox"/> Welding equipment |
| <input type="checkbox"/> Lumber | <input type="checkbox"/> Workbenches |
| <input type="checkbox"/> Roofing materials | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Sewer pipes | |

Yard and Garden Items

- | | |
|--|--|
| <input type="checkbox"/> Animal houses
(doghouses, rabbit
hutches, etc.) | <input type="checkbox"/> Garden tools |
| <input type="checkbox"/> Barbecue grills | <input type="checkbox"/> Lawnmowers |
| <input type="checkbox"/> Birdbaths | <input type="checkbox"/> Mailboxes |
| <input type="checkbox"/> Bird feeders | <input type="checkbox"/> Picnic tables |
| <input type="checkbox"/> Bird houses | <input type="checkbox"/> Porch or patio
furniture |
| <input type="checkbox"/> Bug lights | <input type="checkbox"/> Signs and posts |
| <input type="checkbox"/> Carts | <input type="checkbox"/> Snowblowers |
| <input type="checkbox"/> Coldframes | <input type="checkbox"/> Storage sheds |
| <input type="checkbox"/> Driftwood | <input type="checkbox"/> Swimming pools |
| <input type="checkbox"/> Fencing | <input type="checkbox"/> Tractors and
trailers |
| <input type="checkbox"/> Fertilizer spreaders | <input type="checkbox"/> Trees and shrubs |
| <input type="checkbox"/> Flagpoles | <input type="checkbox"/> Trellises |
| <input type="checkbox"/> Garden tillers | <input type="checkbox"/> Wheelbarrows |
| | <input type="checkbox"/> Yard decorations |
| | <input type="checkbox"/> _____ |

Children's Playthings

- | | |
|--|---|
| <input type="checkbox"/> Bicycles, tricycles | <input type="checkbox"/> Tire swings |
| <input type="checkbox"/> Playhouses | <input type="checkbox"/> Wagons |
| <input type="checkbox"/> Sandboxes | <input type="checkbox"/> Other outside toys
like trucks or sand
molds |
| <input type="checkbox"/> Sleds, toboggans | |
| <input type="checkbox"/> Swingsets | <input type="checkbox"/> _____ |

Other Items

- | | |
|--|---------------------------------------|
| <input type="checkbox"/> Cars or trucks | <input type="checkbox"/> Plants |
| <input type="checkbox"/> Car parts | <input type="checkbox"/> Stored tires |
| <input type="checkbox"/> Car ramps | <input type="checkbox"/> (snow tires) |
| <input type="checkbox"/> Farm implements | <input type="checkbox"/> _____ |

Please inspect anything that was stored outside!

Signature: _____